REMARKS

Claims 1-15 were pending in the application, and were each rejected.

Claims 1, 6, and 11 have been amended as set forth herein; claims 5, 10, and 15 have been canceled herein.

Claims 1-4, 6-9, and 11-14 remain pending in this application.

Reconsideration of the claims is respectfully requested.

OBJECTIONS TO THE DRAWINGS

The Examiner is thanked for noting the typographic errors in Figures 13 and 14. These have been corrected in the attached Replacement Sheets, and the objections are believed obviated.

OBJECTIONS TO THE SPECIFICATION

Again, the Examiner is thanked for noting various typographic errors in the specification. These have been corrected above, and the objections are believed obviated.

Applicant also notes the Examiner's request for the documents listed in the specification. The undersigned does not possess and has not reviewed any of these documents, but has inquired of the applicant inventor; any of these documents in the inventor's possession will be formally submitted in an IDS as soon as possible.

CLAIM REJECTION UNDER 35 U.S.C. § 112

§112, first paragraph (Enablement):

Claims 5, 10, and 15 were rejected under 35 U.S.C. § 112, first paragraph as claiming subject matter that is not described in the specification in a manner enabling one skilled in the relevant art to make or use the claimed invention. These claims are cancelled, and the rejection is believed moot.

§112, second paragraph (Indefiniteness):

Claims 6-15 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter. These rejections are believed moot in light of the claim amendments above, and are traversed.

Accordingly, Applicant respectfully requests the Examiner to withdraw the § 112 rejection.

CLAIM REJECTION UNDER 35 U.S.C. §101

Claims 1-15 were rejected as drawn to non-statutory subject matter. The independent claims are amended above to accommodate the Examiner's concern, and these rejections are believed obviated and are therefore traversed.

CLAIM REJECTION UNDER 35 U.S.C. §102

Claims 1-15 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,315,537 to *Blacker*, hereinafter "Blacker". This rejection is respectfully traversed.

Applicant appreciates the Examiner making a full analysis of the claims on the merits despite the 112/101 issues.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP § 2131, p. 2100-76 (8th ed., rev. 4, October 2005) (*citing In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990)). Anticipation is only shown where each and every limitation of the claimed invention is found in a single prior art reference. *Id.* (*citing Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987)).

Claim 1 requires loading, in a data processing system, a model having a plurality of nodes. The Examiner cites Blacker col. 6, lines 32-44:

> As illustrated in FIG. 3, the paving technique begins by inputting a boundary at step 100 of one or more ordered and closed loops of connected nodes. FIG. 12(A) illustrates the initial loops as the permanent boundary of the region. The connectivity and location of nodes on the permanent boundaries are not allowed to change during paving so that mesh compatibility is ensured with adjacent regions The permanent boundaries of the regions are either exterior or interior boundaries. Only one exterior permanent boundary exists for a region that must be a loop of nodes that is nonintersecting and completely encloses the region to be meshed.

Claim 1 also requires receiving a selection of a node of the model. The Examiner cites to

col. 12, lines 30-34:

> The paving boundary smooth step 131 is a modified isoparametric smooth that is limited to nodes on the current paving boundary that are not part of the permanent boundary. As discussed above, the permanent boundary nodes are never free to move.

As can be seen, nothing in this passage teaches or suggests a selection of a node of the

model, or that a selection is received by anything. As such, Blacker does not meet the limitations

of the claims.

Claim 1 also requires determining a nodal valency of the selected node. The Examiner

simply references Figure 12(b) for this point. Figures 12(A)-12(D) illustrate iteratively forming
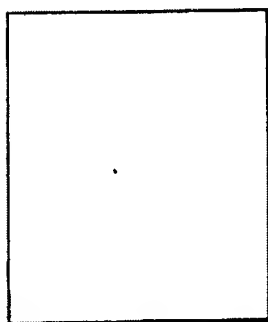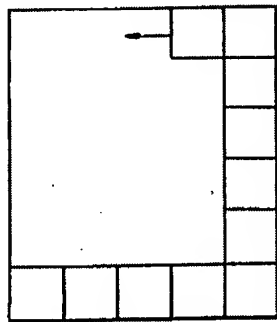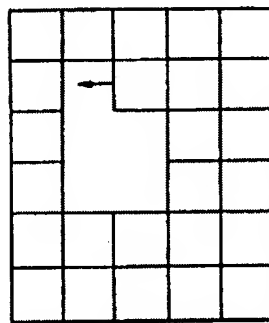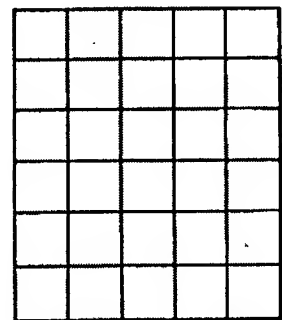
rows:

FIG. 12(a)   FIG. 12(b).   FIG. 12(c)   FIG. 12(d)

The description of these figures is found in col. 6, lines 14-31:

> The finite element analysis uses the generated quadrilateral mesh representation of the geometric region as illustrated in FIGS. 12(A)-12(D).
>
> After inputting the data for the geometric region into the data base, an all quadrilateral mesh is automatically generated by the paving technique of the present invention without decomposing the geometric region. The paving technique is accomplished by iteratively paving the geometric region with rows of quadrilateral elements from the exterior boundaries toward the interior of the geometric region. The paving technique includes an interdependent series of steps as illustrated in FIG. 3. FIGS. 12(A)-12(D) illustrate iteratively paving rows of quadrilateral elements toward the interior of the geometric region until the region is eventually filled with the quadrilateral elements The interdependent series of steps in the paving technique includes choosing a row, closure checking, row generation, smoothing, seaming, row adjusting, intersecting and cleaning up which will be described below in more detail

As can be seen, nothing at all in these figures, the accompanying description, or anything else in Blacker teaches or suggests determining the nodal valency of any node. As such, Blacker cannot anticipate the claims.

Claim 1 also requires determining an element connectivity pattern of the selected node. The Examiner again simply refers to Figure 12(b). While the relevant passages describe rows of quadrilateral elements, nothing in Blacker teaches or suggests determining an element connectivity pattern of the selected node, as claims. As such, Blacker cannot anticipate the claims.

Claim 1 also requires performing a smoothing operation on the selected node according to the nodal valency and the element connectivity pattern. As Blacker does not teach or suggest anything related to nodal valency or element connectivity patterns, any smoothing performed by

Blacker is not done according to the nodal valency and the element connectivity pattern, as claimed. As such, Blacker cannot anticipate the claims.

All independent claims have similar limitations not taught or suggested by the art of reference, and so all claims distinguish over all cited art. All rejections are traversed.

Accordingly, Applicant respectfully requests the Examiner to withdraw the § 102 rejection with respect to these claims.

The undersigned cordially <u>requests that Examiner telephone</u> to resolve any remaining issues.

CONCLUSION

As a result of the foregoing, all remaining claims in the Application are in condition for allowance. Applicant respectfully requests that this Application be passed to issue.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *manderson@munckbutrus.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

MUNCK BUTRUS P.C.

Date: 4/4/7

Matthew S. Anderson
Registration No. 39,093

P.O. Drawer 800889
Dallas, Texas 75380
(972) 628-3600 (main number)
(972) 628-3616 (fax)
E-mail: *manderson@munckbutrus.com*